CLAIMS:

1. A recordable optical record carrier comprising an information layer (3) of a recording material for forming marks and lands representing an information, a substrate layer (2) carrying said information layer (3) and a cover layer (5) covering said information layer (3), said substrate layer (3) comprising a radially evolving groove structure filled with recording material, characterized in that said groove structure comprises a main groove (21; 22) divided into two neighboring sub-grooves (211, 212; 221, 222) separated by a barrier (213; 223).

2. A recordable optical record carrier as claimed in claim 1, wherein said barrier (213; 223) is made of substrate material.

3. A recordable optical record carrier as claimed in claim 1, wherein the height of said barrier (213; 223) is equal to or smaller than the height of the substrate (23) between two neighboring main grooves (21; 22).

4. A recordable optical record carrier as claimed in claim 1, wherein the recording material is an organic material, in particular a dye, or an anorganic material, in particular a phase-change material.

5. A recordable optical record carrier as claimed in claim 1, wherein the shape of the main groove (21; 22) and the sub-grooves (211, 212; 221, 222) is adapted so as to obtain marks having an essentially oval shape in radial direction (r).

6. A recordable optical record carrier as claimed in claim 1, wherein the width of the sub-grooves (211, 212; 221, 222) in radial direction (r) increases in the direction facing away from said substrate layer (2), in particular having flank angles (α) in an angle range of 10 to 90°.

7. A recordable optical record carrier as claimed in claim 1, further comprising a metal and/or a dielectric layer (4) between said information layer (3) and said cover layer (5).